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Short communication

Corona virus disease-19 (COVID-19) presenting as conjunctivitis: atypically high-risk during a pandemic

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Dear Editor,

The outbreak of the novel corona virus disease -19 (COVID-19) has led to an outburst of publications in the medical literature. Clinical characteristics of patients with a definite diagnosis of COVID-19 has been widespread but mainly include fever, cough, and/or shortness of breath [1,2].

A 65-years-old Caucasian diabetic male patient presented to the ophthalmology clinic complaining of burning eye and discharge for the last two days. He denied having fever, cough, or any other symptoms. His body temperature was 98.2 °F (36.8 °C) and 98.4 °F (36.9 °C) at two separate measures. His past medical history was only significant for diabetes mellitus under treatment with Metformin 500 mg twice daily. He did not have a recent travel history or any illnesses. Slit lamp examination yielded mucoid discharge and follicular conjunctivitis (Fig. 1). Establishing a diagnosis of viral conjunctivitis, symptomatic treatment with artificial tear was prescribed. Two days later, the patient visited emergency room with a sudden-onset fever of 101.4 °F, dry cough, and shortness of breath. A computed tomography (CT) scanning of the chest revealed bilateral ground glass opacity of the lungs (Fig. 2). The real-time reverse transcription polymerase chain reaction (RT-PCR) of the nasopharyngeal swab confirmed the diagnosis of COVID-19. Subsequently, another RT-PCR testing of the conjunctival secretion was positive for COVID-19 at two separate occasions. Patient received supportive care with nasal 100 % O₂ along with oral administration of Oseltamivir capsule 75 mg bid and Hydroxychloroquine tablet 200 mg bid. Following improvement of symptoms, he was discharged home uneventfully.

Ocular manifestations of COVID-19 have not been the centre of attention by emerging guidelines during the outbreak [1,3–5]. Ranging from conjunctival hyperemia, hypersecretion, chemosis, to epiphora, ocular secretions might be a poor source for testing of COVID-19 [5]. In a series of 38 patients with clinically-proven COVID-19 from Huebi province of China, Wu et al. found that almost one third of the patients (12 cases) had the ocular manifestations of COVID-19 [4]. Of the twelve patients with COVID-19-related ocular diseases, 11 had positive RT-PCR from nasopharyngeal swab while only two cases had a positive PCR from both nasopharyngeal and ocular secretions. Although the PCR result could have been negative at the first time of this patient's presentation, lack of proper personal protection by our staff at that time might be an example of a high-risk practice. Moreover, unlike the case series by Wu et al., this patient presented initially with a viral conjunctivitis and later developed classic presentation of the COVID-19.

The important lesson to be learnt from this patient is that during the COVID-19 pandemic, any viral diseases should be treated as a high-risk condition unless proven otherwise. Although classic presentations of COVID-19 developed later during the course of the diseases, its initial atypical period significantly increased the risk of viral transmission, especially for the examiners who sat at a close distance from the patient in the slit lamp. During the pandemic, any patient with a clinical scenario suggestive of a viral disease should be considered potentially contagious, even without common presentation of COVID-19. Although confirmatory test by diagnostic PCR might not be readily available at all settings, personal protective equipment must be utilized in such atypical cases.

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Fig. 1. Watery eye discharge accompanied by conjunctival follicular reaction and chemosis; lower lid was everted by the examiner to show palpebral conjunctiva.



Fig. 2. Pulmonary computed tomography scanning of the patient showed ground glass opacity due to COVID-19.

Declaration of Competing Interest

None.

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